Supreme Court, U.S.
FILED
JAN 15 1986
JOSEPH F. SPANIOL, JR.
CLERK

No. 85-1057

In the Supreme Court

OF THE

United States

OCTOBER TERM, 1985

OTARI CORPORATION
Petitioner,

VS.

KING INSTRUMENT CORPORATION,
Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

RESPONDENT'S BRIEF IN OPPOSITION

HAROLD C. HOHBACH*
ELMER S. ALBRITTON
DONALD N. MACINTOSH
WILLIAM J. EGAN III
RICHARD F. TRECARTIN
RICHARD P. DOYLE, JR.

FLEHR, HOHBACH, TEST,
ALBRITTON & HERBERT
Suite 3400
Four Embarcadero Center
San Francisco, CA 94111
(415) 781-1989

*Counsel of Record

Attorneys for Respondent

BOWNE OF SAN FRANCISCO, INC. • 190 NINTH ST. • S.F., CA 94103 • (415) 864-2300

BEST AVAILABLE COPY

TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	ii
TABLE OF ABBREVIATIONS	iii
RULE 28.1 STATEMENT	iii
BACKGROUND	1
SUMMARY OF ARGUMENT	2
ARGUMENT	2
THE LAW	2
CLAIM INTERPRETATION	2
INFRINGEMENT	9
1. Literal Infringement	9
2. Doctrine of Equivalents	10
OTARI'S ARGUMENT	11
BURDEN OF PROOF	13
CONCLUSION	14

TABLE OF AUTHORITIES

Cases

Page

Adams v. U.S., 165 Ct. Cl. 576, 330 F.2d 622, 141 U.S.P.Q. 361 (1964), aff'd. 383 U.S. 39, 148 U.S.P.Q. 479 (1966) 6

Bendix Corp. v. U.S., 199 U.S.P.Q. 203 (Ct. Cl. 1978) ... 6

D.M.I., Inc. v. Deere & Co., 755 F.2d 1570, 225 U.S.P.Q. 236 (Fed. Cir. 1985) 8, 12

Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605, 85 U.S.P.Q. 328 (1950), reh. denied, 340 U.S. 845 (1950) 10, 11, 12

Hale Fire Pump Co. v. Tokai, Ltd., 614 F.2d 1278 n. 5, 205 U.S.P.Q. 123 n. 5, (C.C.P.A. 1980) 6

Halliburton Oil Well Cementing Co. v. Walker, 329 U.S. 1, 71 U.S.P.Q. 175 (1946) 3, 4

Palumbo v. Don-Joy Co., 762 F.2d 969, 226 U.S.P.Q. 5 (Fed. Cir. 1985) ..... passim

Paper Converting Machine Co. v. Magna-Graphics Corp., 211 U.S.P.Q. 788 (E.D. Wis. 1981), aff'd. 680 F.2d 483 (7th Cir. 1982) 6

Stearns v. Tinker & Rasor, 252 F.2d 589, 116 U.S.P.Q. 222 (9th Cir. 1957) 6

Technitrol, Inc. v. Control Data Corp., 550 F.2d 992, 193 U.S.P.Q. 257 (4th Cir. 1977), cert. denied, 434 U.S. 822 (1977) 6

United States v. United States Gypsum Co., 333 U.S. 364 (1948), 76 U.S.P.Q. 430, reh. denied, 333 U.S. 869 (1948) 13

TABLE OF AUTHORITIES

Statutes

Page

35 U.S.C.:

§ 112 ..... 4, 5, 6, 7, 8, 9, 12

§ 271(a) 3, 9

Supreme Court Rule 17 12

Federal Rules of Civil Procedure:

52(a) 13

Publications

Federico, COMMENTARY ON THE NEW PATENT ACT, 35 U.S.C. 1, 25-26 (1984) 4

5A *Moore's Federal Practice*, § 52.03[1] (2nd ed. 1984) 13, 14

Address by Giles S. Rich on the Patent Act of 1952 to the New York Patent Law Association (November 6, 1952) (Reproduced in *Calvert's Encyclopedia of Patent Practice and Invention Management*, p. 17 (1964)) 4, 5

TABLE OF ABBREVIATIONS

PA ..... Petitioners Appendix

RA ..... Respondents Appendix

RULE 28.1 STATEMENT

King Instrument Corporation has no parent company nor any subsidiaries or affiliates.

No. 85-1057

In the Supreme Court

OF THE

United States

OCTOBER TERM, 1985

OTARI CORPORATION,
Petitioner,

VS.

KING INSTRUMENT CORPORATION,
Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

RESPONDENT'S BRIEF IN OPPOSITION

BACKGROUND

This petition involves a patent infringement suit in which Otari, the petitioner in this case, was found to directly infringe King's U.S. patent No. 3,637,153 ('153).[1] On appeal, the issue before the Federal Circuit was:

> whether there is, under the proper standard, a preponderance of evidence supporting the District Court's finding of infringement.

(RA-17).

---

[1] A finding of *direct* infringment is synonomous with a finding of *literal* infringement. Both refer to Otari's apparatus which is encompassed by the specific wording of the '153 patent claim(s). These claim(s) are that portion of the patent which identifies what in fact is being protected by the patent.

The Federal Circuit went on to affirm the trial court's finding of literal infringement stating:

> [Otari] has failed to meet its ultimate burden of convincing this court that the district court's finding of infringement was clearly erroneous.

(RA-19).

SUMMARY OF ARGUMENT

The Federal Circuit, by affirming the district court's finding that Otari's machines literally infringe King's '153 patent, did not make any factual findings *de novo*.

The Federal Circuit, by finding that Otari had failed to prove that the district court's holding of patent infringement was clearly erroneous, did not place an improper burden of proof upon Otari.

ARGUMENT

THE LAW

A brief review of the relevant patent law is necessary to put Petitioner's arguments in context, since, Petitioner is either totally confused as to the law or is purposely attempting to mislead this Court on the state of well settled patent law as espoused by the Federal Circuit.

The issue of patent infringement, in a cause of action for patent infringement, is broken down into two steps:

> First, the scope of the claims must be ascertained . . . [and]
>
> [Second,] the trier [of fact] must decide whether the claims cover the accused device.

Palumbo v. Don-Joy Co., 762 F.2d 969, 974, 226 U.S.P.Q. 5, 7 (Fed. Cir. 1985).

CLAIM INTERPRETATION

It is well settled law that the construction of a claim, a question of law, is necessary to define the metes and bounds of the

protection afforded by the patent's claims. *Palumbo*, 762 F.2d at 974, 226 U.S.P.Q. at 8. In other words, the patent claims define the extent of the patentee's exclusive right to make, use and sell the claimed invention. 35 U.S.C. 271.

Claims may, at the option of the applicant for patent, be drafted in one of several formats depending on both the type of invention sought to be protected and the type of protection desired. The claims at issue involve a statutorily prescribed format referred to as a "means plus function" format.

Prior to the present patent statute it was permitted practice to obtain a patent on an invention which consisted of a "new" combination of elements, the elements of which had existed individually before. For example, one of the greatest inventions of our century, the incandescent light bulb, was a new combination of old elements such as glass, wire, metal, etc. While the ability to patent new combination inventions was black letter patent law, several courts, including the Supreme Court in *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1, 71 U.S.P.Q. 175 (1946), placed strict guidelines on the requirements for combination invention claim language.

In *Halliburton*, the patentee sought to obtain a patent on a new combination of old elements, relating to an apparatus used to facilitate the pumping of oil out of wells which do not have sufficient natural pressures to force the oil to gush. The court in reviewing the claims which had been drafted in means plus function format held that "the language of the claim thus describes this most crucial element in the 'new' combination in terms of what it will do rather than in terms of its own physical characteristics . . ." such as its structure, material or acts in support thereof. *Halliburton*, 329 U.S. at 9. The Court concluded that "a claim with such a description of a product is invalid." *Id.* The Court finished by saying its decision "is quite consistent with the strict interpretation of patents for machines which combine old elements to require clear description in combination claims." *Halliburton*, 329 U.S. at 10.

The last paragraph of 35 U.S.C. 112 was added to the present statute at its inception in 1956 to remedy this narrow construction of means plus function claims. It reads as follows:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and *equivalents thereof.* [Emphasis added.]

Pat Federico, a principal drafter of the 1956 patent statute and Examiner in Chief, at that time, of the then U.S. Patent Office (now the U.S. Patent and Trademark Office), stated:

> The last paragraph of § 112 relating to so-called functional claims is new. It provides that an element of a claim for a combination . . . may be expressed as a means or step for performing a specified function, without the recital of structure, material or acts in support thereof. It is unquestionable that some measure of greater liberality in the use of functional expressions in combination claims is authorized than had been permitted by some court decisions, and that decisions such as that in *Halliburton Oil Well Cementing Co. v. Walker,* 67 S.Ct. 6, 329 U.S. 1, 91 L.Ed. 3 (1946), are modified or rendered obsolete, but the exact limits of the enlargement remain to be determined.

Federico, COMMENTARY ON THE NEW PATENT ACT, 35 U.S.C.A. 1, 25-26 (1984).

Giles S. Rich, presently a Circuit Judge on the Court of Appeals for the Federal Circuit, was also intricately involved in the drafting of the 1956 statute as a member of the Drafting Committee appointed by the Coordinating Committee of the National Council of Patent Law Associations, had this to say about the last paragraph of § 112:

> The third paragraph, the last, authorizes claiming an element of a combination, not any element but only an element of a combination, in terms of means plus function. The language is such as to include a combination of steps, as in a process

> . . . you will recognize its applicability to the Halliburton case . . .[2]

Address by Giles S. Rich on the Patent Act of 1952 to the New York Patent Law Association (November 6, 1952) (Reproduced in *Calvert's Encyclopedia of Patent Practice and Invention Management*, p. 17 (1964)).

Accordingly the purpose of the addition of the term "equivalents thereof" was to allow a patentee to include within the *literal* construction of his claim various means for carrying out a specific function, rather than, being limited to the traditional specific embodiment described in the specification. The specification is that portion of the patent which fully describes, discloses and explains how to make and use the claimed invention.

To this end § 112, sixth paragraph, expressly states the patentee is entitled to a claim covering "equivalents thereof" as well as the specific structure, material or acts recited in the specification. As mentioned by Judge Rich, *supra:*

> if you adopt this practice, that element or step is to be construed—shall be construed (it is mandatory)—to cover the corresponding structure, material or acts described in the specification and equivalents thereof.

Calvert's, *supra* at p. 17.

The Federal Circuit, this year, in *Palumbo*, directly addressed the literal construction of a means plus function claim and stated that the District Court:

> by limiting the '744 patent to its specific embodiment necessarily found that equivalents under 35 U.S.C. 112 do not exist in this case. That determination rests on a misunder-

---

[2] The sixth paragraph of § 112 at the time of the 1956 statute was the third paragraph. Since the passing of the statute, § 112 has been amended, and expanded, to include six paragraphs.

standing of the prosecution history and of the nature of the § 112 equivalents.[3]

Palumbo, 762 F.2d at 978, 226 U.S.P.Q. at 8.

In sum, each element of a claim which is written in means plus function format must be interpreted according to the specification *and its § 112 equivalents* to determine the metes and bounds of the claim.

---

[3] *See also Paper Converting Machine Co. v. Magna-Graphics Corp.,* 211 U.S.P.Q. 788, 791 (E.D. Wis. 1981), aff'd. 680 F.2d 483 (7th Cir. 1982) (An element in a claim for a combination patent may be expressed "as a means or step for performing a specified function [without the recital of structure, material, or acts in support thereof,] and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof."); *Hale Fire Pump Co. v. Tokai, Ltd.,* 614 F.2d 1278 n. 5, 205 U.S.P.Q. 123, 126 n. 5, (C.C.P.A. 1980) (Here, the determinant for the coverage of claim 1 is the structure shown in the specification which corresponds to a releasable means, and any "equivalents thereof."); *Bendix Corp. v. U.S.,* 199 U.S.P.Q. 203, 222 (Ct. Cl. 1978) (Definition of an element of a combination claim by use of the term "means," without recital of structure, material, or acts in support thereof, is a common staple of patent claim terminology. Claims embodying this type of terminology shall be construed to cover not only the "corresponding structure" described in the specification, but also "equivalents thereof."); *Technitrol, Inc. v. Control Data Corp.,* 550 F.2d 992, 193 U.S.P.Q. 257, 262-63 (4th Cir. 1977), cert. denied, 434 U.S. 822 (1977) (Thus the third paragraph [the sixth paragraph of § 112 as presently written] is held to deal with permissive claiming; and, if language coming within the statute is used in the claim, directs how the courts shall construe that language.); *Adams v. U.S.,* 165 Ct. Cl. 576, 581, 330 F.2d 622, 626, 141 U.S.P.Q. 361, 363-64, aff'd. 383 U.S. 39, 148 U.S.P.Q. 479 (1966) (It is evident that this section [35 U.S.C. § 112] does not require an inventor to disclose every possible way in which his invention may be used, nor does it limit the claims of the patent to the particular mode which the inventor considers best at the time of filing his application for patent.); *Stearns v. Tinker & Rasor,* 252 F.2d 589, 597-98, 116 U.S.P.Q. 222, 228 (9th Cir. 1957) (Such claim will be construed to cover that which is described and the equivalents thereof. But the structure need not be recited in the claim.).

Therefore before arriving at the issue of patent infringement in a means plus function claim, one must apply the statutory requirement of § 112 equivalents to obtain the proper legal construction of the claim.

This was done, in our case, by the Federal Circuit, as it stated:

> As always in an infringement analysis, *we start* by looking to the language of the claims of the '153 patent. The most relevant portions of the claim language in issue are the "means plus function" clauses. Those means clauses appearing in claim 2 are illustrative:
>
> > Apparatus for severing a leader tape that is attached at its opposite ends to two hubs into two leaders and for splicing said leaders to the opposite ends of a length of use tape obtained from a supply roll of said use tape, said apparatus comprising:
> >
> > 1. a splicing station comprising a first stationary tape support member and second and third moveable tape support members;
> > 2. *means for alternatively shifting said second and third support members* . . . ;
> > 3. a knife operable to slit tape supported on said first and second splicing heads;
> > 4. *means for holding said supply roll of use tape* . . . ;
> > 5. selectively operable third tape-holding *means* . . . ;
> > 6. selectively operable tape applicator *means* . . . ;
> > 7. selectively operable tape-winding *means* . . . ;
> > 8. *control means* for sequentially operating the foregoing means . . . . [Emphasis and numbers added.]

(RA-17-18).

This claim, claim 2 of the '153 patent, contains 8 elements each represented by a number in the margin. In order for a device to literally infringe claim 2 it is necessary that it literally practice each specified element of the claim. Element 2 and elements 4

through 8 which are drafted in means plus function format do not specify a particular structure as in elements 1 and 3. Therefore element 2 and elements 4 through 8 must be interpreted according to the specification and its § 112 equivalents to determine the literal scope or construction of claim 2.

For example, element 2 states "means for alternatively shifting said second and third support members . . ." This element was described by the trial court in light of the specification, as the swing arm device. It would be improper in light of § 112 equivalents to limit the scope of the claim to only cover the swing arm device. *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 225 U.S.P.Q. 236, 238 (Fed. Cir. 1985) (The statute § 112-6 was written precisely to avoid a holding that a means-plus-function limitation must be read as covering only the means detailed in the specification.).

The Federal Circuit acknowledged the mandate of § 112, sixth paragraph, that the § 112 equivalents of the preferred embodiment in the specification, the swing arm device, be included within the *literal* scope of the claim, stating:

> Otari has not cited any reason or basis in the record for limiting the '153 means claims to the swing arm embodiment.

(RA-19).

The Federal Circuit went on to hold:

> We believe that this testimony [referrring to expert testimony before the District Court] is sufficient for the District Court to have concluded that Otari's machines are § 112 equivalents, and therefore literally infringe the '153 patent.

(RA-19).

In other words, the Federal Circuit held the literal scope of King's '153 patent claim, when interpreted in light of § 112 equivalents, covered Otari's machines.

INFRINGEMENT

1. Literal Infringement

Once the claims have been legally construed the issue then becomes one of infringement, a factual issue. Infringement may be found in two ways, literally or by the "doctrine of equivalents." The first, literal infringement, is statutory, as defined by 35 U.S.C. 271(a). Thus if an accused device falls within the *specific* claim language of the "patented invention" that device will literally infringe the patent. In the context of a claim which has been drafted in means plus function format, as is the case here, literal infringement will include a device which is covered by the § 112 equivalents of the element drafted in means plus function format. As stated by the Federal Circuit, "use of an equivalent under § 112 can lead to literal infringement." *Palumbo,* 762 F.2d at 975 n. 4, 226 U.S.P.Q. at 9 n. 4.

This is in fact what the district court found in this case:

> 17. The Otari machines . . . directly infringe claims 2, 4, 5, 6, 8, 9, 10, 11, 12, 14 and 16 of the '153 patent. (PA-3)
>
> 18. The Otari machine VL-100 directly infringes claims 2, 4, 5, 6, 8, 9, 10, 11, 12 and 14 of the '153 patent. (PA-4)

The Federal Circuit considered these findings by the district court on appeal, as it stated:

> The District Court ruled that the Otari machines *directly* infringed the claims of the '153 patent. [Emphasis added.]

(RA-17).

After reviewing the evidence presented on appeal the Federal Circuit held:

> In the current case, there is significant evidence drawn from expert testimony which supports the conclusion that the Otari devices are § 112 equivalents of the described embodiment . . . We believe that this testimony is sufficient for the District Court to have concluded that Otari's machines are § 112 equivalents, and therefore *literally* infringe the '153 patent. [Emphasis added.]

(RA-19).

The Federal Circuit simply affirmed the trial court's finding of *direct* infringement of the '153 patent. As stated by this Court in *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 607, 85 U.S.P.Q. 328, 330 (1950), Reh. denied, 340 U.S. 845 (1950):

> In determining whether an accused device or composition infringes a valid patent, resort must be had in the first instance to the words of the claim. If accused matter falls clearly within the claim, infringement is made out and *that is the end of it.* [Emphasis added.]

2. Doctrine of Equivalents

Assuming the district court had not found that Otari directly infringed the '153 patent, it could, if argued by the parties, proceed to review the accused device pursuant to the judicially created "doctrine of equivalents." This doctrine may support a finding of patent infringement even when literal infringement is not present. The Supreme Court in acknowledging the doctrine of equivalents stated:

> A patentee may invoke this doctrine to proceed against the producer of a device "if it performs substantially the same function in substantially the same way to obtain the same result."

Graver Tank, 339 U.S. at 608.

The Supreme Court in discussing the purpose behind the "doctrine of equivalents" stated:

> One who seeks to pirate an invention, like one who seeks to pirate a copyrighted book or play, may be expected to introduce minor variations to conceal and shelter the piracy. Outright and forthright duplication is a dull and very rare type of infringement. To prohibit no other would place the inventor at the mercy of verbalism and would be subordinating substance to form. It would deprive him of the benefit of his invention and would foster concealment rather than disclosure of inventions, which is one of the primary purposes of the patent system.

> The "doctrine of equivalents" evolved in response to this experience.

Graver Tank, 339 U.S. at 607.

It is apparent from the Court's discussion that a primary goal behind the "doctrine of equivalents" is to protect the patentee against a pirate who wishes to deprive the patentee of his just reward. Therefore if a patentee is able to prove literal infringement, "that is the end of it.", *Graver Tank*, 339 U.S. at 607, and it is unnecessary for the patentee to proceed under the "doctrine of equivalents" to protect his patented invention.

In this case the district court expressly found direct infringement, and on appeal, the only issue before the Federal Circuit was whether that finding was clearly erroneous.

OTARI'S ARGUMENT

Otari alleges that the Federal Circuit made a finding of fact *de novo* on infringement pursuant to the "doctrine of equivalents" and that no evidence was offered on the subject (Otari's Petition, Questions Presented for Review #2 & 3, p. ii). For example, the following excerpts summarize Otari's legal argument:

p. 4 At trial . . . Otari, did not offer proof of infringement—equivalency or otherwise . . .

p. 4 The court of appeals itself set about to make a finding *de novo* of equivalency.

p. 5 The court of appeals, erroneously thinking that the party accused of infringement should bear the burden of proving non-equivalency . . .

p. 6 [King's expert] expressly disclaimed reliance on the "doctrine of equivalents".

p. 8 The burden of proof of patent infringement correctly remains throughout with the patentee although if the patentee fails at proving a literal infringement the patentee may invoke the doctrine of equivalency [sic] . . . (Citing *Graver Tank*.)

p. 9 The finding of equivalence is a determination of a *fact.* (Citing *Graver Tank.*)

p. 15 a finding of patent infringement by equivalence is a finding of fact . . . (Citing *Graver Tank.*)

Otari in its Petition has totally confused the "doctrine of equivalents" pursuant to *Graver Tank, supra,* and "equivalents" pursuant to 35 U.S.C. 112, 6th paragraph.

The Federal Circuit has had ample opportunity to address the distinction between the "doctrine of equivalents" and § 112 equivalents. In *Palumbo,* the Federal Circuit stated:

> Nevertheless, the "doctrine of equivalents" (which is often asserted when literal infringement is absent) is distinct and can be different from the idea of "equivalents" under § 112; . . . For one thing use of an equivalent under § 112 can lead to literal infringement (rather than infringement under the "doctrine of equivalents").

Palumbo, 762 F.2d at 975 n. 4, 226 U.S.P.Q. at 8 n. 4.

Moreover, in *D.M.I., Inc. v. Deere & Co.,* 755 F.2d 1570, 1575, 225 U.S.P.Q. 236, 239 (Fed. Cir. 1985), the Federal Circuit most succinctly stated:

> the word "equivalent" in § 112 should not be confused, as it apparently was here, with the "doctrine of equivalents."

Both these cases were cited by the Federal Circuit. (RA-18-19)

Hopefully, the Court can see from the prior procedural history that the *"doctrine of equivalents"* was never presented in this case. Otari is simply legally incorrect and confused in its free substitution of the same legal term, "equivalents," used in two separate legal contexts.

Accordingly, on the issue of the Federal Circuit's affirmance of the district court's finding of literal infringement, Otari has failed to show special or important reasons why this court should grant certiorari pursuant to Supreme Court Rule 17.

BURDEN OF PROOF

Otari alleges:

> [The Federal Circuit] placed a burden of proving non-infringement on Otari. This was a clear error of law.

While Otari is correct that the burden of proving patent infringement is on the patentee, patent infringement is not the issue on appeal. Rather, the issue on appeal is whether the District Court's factual finding of patent infringement is "clearly erroneous." F.R.C.P. 52(a). Rule 52(a) provides in pertinent part:

> Findings of fact will not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge the credibility of the witnesses.

In *United States v. United States Gypsum Co.*, 333 U.S. 364, 395 (1948), the Supreme Court set forth the scope of appellate review under Rule 52(a):

> A finding is "clearly erroneous" when although there is evidence to support it, the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed.

As stated in *Moore's Federal Practice*, regarding the appellate burden of proof:

> A strong presumption exists in favor of the trial court's findings of fact, and the burden of proof is on the party attacking their validity. The trial court's findings are sustained in the vast majority of cases. [Footnoted citations omitted.]

5A *Moore's Federal Practice*, § 52.03[1] at p. 52-30 (2nd ed. 1984).

As properly acknowledged by the Federal Circuit:

> we review the record in order to determine whether there is, under the proper standard, a preponderance of evidence supporting the district court's finding of infringement.

(RA-17).

The Federal Circuit after reviewing Otari's appellate argument stated:

> Otari has failed to point out why Zimmerman's [King's expert witness] conclusions were wrong, has failed to describe its machines to this Court, and has failed to meet its ultimate burden of convincing this court that the district court's finding of infringement was clearly erroneous.

(RA-19).

Otari has not shown how the standard of appellate review, of the District Court's factual findings, employed by the Federal Circuit is in error. In fact, this standard of review is consistently applied throughout the circuits. 5A, *Moore's Federal Practice, supra.*

In sum, the Federal Circuit's finding that Otari failed to prove the District Court's finding was clearly erroneous placed no improper burden of proof on Otari.

CONCLUSION

This Court should deny this petition as petitioner has failed to show any "special and important reasons" pursuant to Supreme Court Rule 17 justifying this Court's time and expertise.

DATED: January 14, 1986

Respectfully submitted,

By HAROLD C. HOHBACH
Counsel of Record
FLEHR, HOHBACH, TEST,
ALBRITTON & HERBERT
Suite 3400
Four Embarcadero Center
San Francisco, CA 94111
(415) 781-1989
Attorneys for Respondent

APPENDIX

KING INSTRUMENT CORPORATION,
Plaintiff-Appellant/Cross-Appellee,
v.

OTARI CORPORATION,
Defendant-Appellee/Cross-Appellant.

Appeal Nos. 84-1528, 84-1529, 84-1558 and 84-1595.

UNITED STATES COURT OF APPEALS,
FEDERAL CIRCUIT.

June 26, 1985.

Owner of patents relating to automated machine for loading magnetic audio or video tape into closed cassettes brought infringement action. The United States District Court for the Northern District of California, William A. Ingram, J., held that patent on "shift lock" machine was invalid and that patent on "swing arm" machine was valid and infringed, and awarded damages to patent owner, and both sides appealed. The Court of Appeals, Davis, Circuit Judge, held that: (1) patent on "swing arm" machine was not invalid for obviousness; (2) patent for "shift lock" machine was invalid as having been "on sale" more than one year prior to date of application for patent; (3) patent on "swing arm" machine was infringed; (4) award of over $2.2 million for lost profits arising from infringement was proper; (5) patent owner was not entitled to award of damages for loss of sales of spare parts; and (6) patent owner was not entitled to increased damages or attorney fees for alleged willfulness of infringement.

Affirmed in part, vacated and remanded in part.

Elmer S. Albritton, Fle[illegible] Hohbach, Text, Albritton & Herbert, of San Francisco, Cal., argued for plaintiff-appellant/cross-appellee. With him on the brief were Donald N. MacIntosh and William A. Cammett; Nicholas A. Pandiscio, Schiller & Pandiscio, of Waltham, Mass., was on the brief, of counsel.

Allen Kirkpatrick, Cushman, Darby & Cushman, of Washington, D.C., argued for defendant-appellee/cross-appellant. With him on the brief were George C. Limbach, Limbach, Limbach & Sutton, of San Francisco, Cal., Henry Y. Ota, Shigeru Watanabe, Kelley, Drye & Warren, of Los Angeles, Cal. and C. Michael Zimmerman, Cushman, Darby & Cushman, of Palo Alto,, Cal.

Before MARKEY, Chief Judge, DAVIS, Circuit Judge, and SKELTON, Senior Circuit Judge.

DAVIS, Circuit Judge.

King Instrument Corporation (King), the plaintiff below, charged Otari Corporation (Otari) with infringement of its U.S. Patent Nos. 3,637,153 ('153) issued January 25, 1972, and 3,737,358 ('358) issued June 5, 1973. King now appeals from final judgment by the United States District Court for the Northern District of California, following a bench trial, that held the '358 patent invalid because the invention claimed was found to be "on sale" under 35 U.S.C. § 102(b). We affirm.

Otari cross-appeals from the district court's holding that the '153 patent is valid and infringed, and that King is entitled to lost profits incurred from the sale of Otari's infringing devices in the amount of $2,282,935, and lost profits of $438,810 and from the sale of "spare parts." We affirm as to the award

based on the infringing devices, and vacate and remand as to the award based on spare parts. We also affirm the district court's determination that King is not entitled to increased damages relating to Otari's sale of infringing devices.

I.

BACKGROUND

A. The King patents.

The patents at issue relate to an automated apparatus for loading magnetic (blank or pre-recorded audio or video) tape into closed cassettes. Before loading, a closed cassette consists of an outer plastic case containing two winding hubs (spools) and a short length of leader tape wound around each hub. After loading, the finished product has a much longer length of magnetic supply ("use") tape which has been spliced to the leader tape. The patents claim an apparatus for automatically cutting, splicing, and winding magnetic use tape into closed cassettes.

The tape loading machine embodying the invention of the earlier '153 patent came to be known as the "swing arm" machine. For appreciation of the apparatus claims of the '153 patent we describe how the swing arm device works. A new cassette having a short length of leader tape with one end wound about one of the hubs and the other end connected to the other hub is mounted onto a holder in the machine. The leader tape is manually pulled out of the cassette, formed into a loop and then extended over two splicing heads. The start button is pressed setting off the following sequence of operations: first, a knife blade just above the splicing heads is thrust forward slitting the leader tape into two sections each of which is held in place by suction on the two re-

spective splicing heads; as the blade returns to its position, the splicing head supporting one section of the leader tape pivots (swings) counterclockwise and is replaced by a third splicing head supporting the magnetic use tape which pivots into a position that is contiguous with and abuts the stationary splicing head supporting the other section of leader tape; a splicing tape dispenser-applicator then pivots downward and splices one section of the leader tape to the magnetic use tape; the tape is wound at a fast rate onto the right hub to a predetermined length; thereafter, the knife is again activated, slitting the use tape, and all the splicing heads swing back to their original positions; the splicing tape dispenser-applicator then pivots downward to splice together the trailing end of the magnetic use tape and the abutting end of the leader tape; at this time, the operator may pull the spliced tape off the splicing heads and eject the cassette from the holder. Disclosed in the specification, but not specifically claimed, this automated operating sequence has been referred to as "cut, shift, splice—wind—cut, shift, splice."

The device disclosed in the '358 patent has been called a "shift block" machine. The assembly disclosed consists of two splicing blocks. The first block has two tape-receiving grooves, and the second block has one tape-receiving groove. Although using a different mechanism, the unclaimed operating sequence is generally the same as in the swing arm machine. The leader tape lies across both blocks whereupon it is cut into two sections by a knife unit. A means is provided for moving one block relative to the other (*i.e.*, horizontally pulling out one block—"shifting") so as to selectively align the second groove of the first block which supports the use tape with the single groove of the second block which supports one end

of the leader tape. A splicing tape dispenser splices the leader tape and use tape. The tape is wound and then severed at a predetermined length. The block shifts back to its original position, aligning and splicing the wound tape with the other "forgotten" leader end.

B. Otari's devices.

Otari has received, held in inventory, assembled and sold tape loading machines bearing model designations DP-6750, DP-2700, VL-100, VL-120/VTW-120, VL-500, VL-600, VL-110 and 37M. The "VL" designation refers to video, as opposed to audio, tape loading machines. Although no documentary evidence which may have been used below to describe the Otari devices appears in the printed record before this court,[1] the record does contain extensive testimony offered by both parties comparing the VL-600 to the claims of the '153 patent. The witnesses included Harris Zimmerman, King's expert; the deposition testimony of James King, Sr., the patentee of both the '153 and '358 patents; Ernest Chilton, Otari's expert; and Dirks Foster, Otari's expert on patent law.

C. Proceedings below.

After considering over 2,000 pages of trial transcripts, 400 exhibits and the credibility of more than 25 witnesses, the district court entered final judgment. The court concluded that the invention claimed in the '153 patent was neither anticipated under 35 U.S.C. § 102(a), nor would have been obvious under

---

[1] In 200 pages of brief and 15 volumes of appendix, the only drawing which appears of any infringing device is a fold-out in Otari's brief describing the sequence of steps of the VL-600. As candidly pointed out by Otari's counsel at oral argument, this aesthetic pictorial was not before the district court. The record below did, however, include video tapes and an extensive manual describing the VL-600 device.

35 U.S.C. § 103. The court found that Otari machines DP-6750, DP-2700, VL-500 and VL-600 directly infringe claims 2, 4, 5, 6, 8, 9, 10, 11, 12, 14 and 16, and Otari machines VL-100, VL-110, and VTW-120 directly infringe claims 2, 4, 5, 6, 8, 9, 10, 11, 12 and 14 of the '153 patent. The court then concluded that King was entitled to its lost profits with respect to the sale by Otari of these machines. The court also awarded damages for lost profits from the sale of "parts" by Otari. Pre-judgment interest was awarded, but enhanced damages for willful infringement and an award of attorney fees were denied.

In holding the '358 shift block patent invalid, the district court found that a device which embodied the claims of the '358 patent and which had been previously reduced to practice was offered for sale to the Morningstar Division of Data Packaging Company (Morningstar) prior to May 27, 1970 (one year prior to the '358 filing date). Except as to its on sale defense, Otari was summarily denied relief on its other counterclaims for invalidity and non-infringement of the '358 patent.

II.

VALIDITY OF THE KING PATENTS

A. The '153 patent.

After considering all the relevant prior art, the district court found that the invention claimed in the '153 patent was not anticipated by the prior art, and also ruled that the differences between the prior art and the claimed subject matter as a whole would not have been obvious to one of ordinary skill in the tape winding art in 1969.[2] Otari argues that the district

[2] In its brief before this court, Otari has argued only the obviousness issue, and therefore we assume it is no longer contending that the '153 patent is invalid for anticipation.

court committed reversible error by not making detailed findings of fact under the guidelines set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 86 S.Ct. 684, 15 L.Ed.2d 545, 148 USPQ 459 (1966), and by failing to recognize the Plastaras patent as the most relevant prior art.

In a § 103 obviousness analysis, *Graham* requires that the trier assess certain underlying facts: (1) the scope and content of the prior art, (2) the level of ordinary skill in the art, (3) the differences between the claimed invention and the prior art, and (4) the so-called "secondary considerations." *See Atlas Powder Co. v. E.I. DuPont De Nemours & Co.*, 750 F.2d 1569, 1574, 224 UPSQ 409, 412 (Fed.Cir.1984). Otari cites *Jones v. Hardy*, 727 F.2d 1524, 220 USPQ 1021 (Fed.Cir.1984) as showing that the district court improperly failed to make express findings relating to these factors. In *Jones*, however, this court reversed the trial court's conclusion of obviousness because the record contained no specific factual findings, no mention of any patented prior art, and was replete with legal error. By comparison, not only did the district court conclude that the '153 patent was nonobvious, but none of the *Jones* "parade of horrors" exists in this case.

During prosecution of the '153 patent, the Patent and Trademark Officer examiner had before him *inter alia*, the Canadian Kilmartin patent. As Otari admits in its brief, Kilmartin relates to butt splicing of tape ends, and has nothing to do with the mechanism involved in cutting, splicing and manipulating tapes so as to insert a length of tape between the ends of two leader tapes.

Before the district court, the prior art offered by Otari consisted of the Ooms article, the Philips machine, and the Plastaras patent (U.S Patent No.

2,794,486). Ooms discloses a system for "multiple speed tape duplicating" such that the ends of the leader tape and trailer (the other end of the severed leader) tape, which were pre-assembled on hubs, are aligned with both ends of the magnetic tape material. Both ends are spliced at two separate stations while the tape is held in place by suction means. All the steps are executed by operator-activated levers.

For the most part, the Philips machine was made in accordance with the Ooms article. As a preliminary step, the leader tape is attached to the two hubs outside the cassette where it is spliced to a supply of magnetic tape which is wound on that hub to a predetermined length. The magnetic tape is cut so that the tail end of the wound tape can be spliced to the leader of the other hub. Using a special hub grabber, these components are placed into one cassette shell-half and then the other cassette shell-half is placed on top.

Another piece of prior art is the Plastaras patent entitled "Method of and Means for Correcting a Phototypographical Film." This invention relates to a manual method for correcting and changing a film on which text has been printed in a phototypographical machine. In making a correction (*i.e.*, removing a line of text) the original film is advanced over a table and fixed by a pair of pins which pass through perforations found on the outer edges of the film. The correction film is advanced to a point chosen by the operator and fixed by another pair of pins. The portion of the original film to be removed (the incorrect line) is severed, leaving the original film in two sections. The original film is then transferred to a welding station where it is welded to the leading edge of the correction film. After transfer back to the cutting station, the welded original and correction films are

severed at the foot of the correct line. The foot of the corrected line is then bu[illegible]-welded to the original film.

After analyzing the prior art, the district court explicitly found that the most relevant prior art applied against the '153 patent includes the Ooms article and Philips machine, conspicuously omitting the Plastaras patent. Otari insists that the Plastaras patent is the most relevant prior art which, when combined with the above art, renders the '153 patent invalid. We disagree.

In contrast to the minute cassette tape used in a '153 patent machine, the film used in the machine described in Plastaras has a width of 4-6 inches. Moreover, the more cumbersome "Plastaras film" is self-supporting and has perforations along the edges to enable the operator to secure the film by using pins. Otari argues that King's expert Zimmerman testified that he would include methods of splicing photographic film as within the relevant art, and therefore Plastaras is as relevant as any other prior art. But Zimmerman clarified his statement by adding that only photographic film in narrow tape form, not (for example) a 3 by 5 negative, should be considered relevant art. Also, there was testimony that Plastaras is directed to the printing industry and not to the high speed loading of magnetic tape into cassettes. To operate the Plastaras machine, textual film is passed across and clamped to two tables. Careful manual adjustments are required at both the cutting and welding stations. Furthermore, Plastaras taught shifting the two (correction and original) films to four different locations. In the light of all this evidence, one can reasonably conclude that the reference is not within the field of this inventor's endeavor, and was not directly pertinent to the particular problem with

which the inventor was involved. *Accord Union Carbide Corp. v. American Can Co.*, 724 F.2d 1567, 1572, 220 USPQ 584, 588 (Fed.Cir.1984). Thus, the district court's finding that the Plastaras patent was not as relevant as the Ooms article and the Phillips machine was not clearly erroneous.

Otari then asserts that the Ooms article and Phillips machine disclose: how to swing leader tape into alignment with use tape for splicing; how to use suction to place the ends of leaders adjacent to the ends of use tape; and how to use pieces of splicing tape to fasten tape sections together. The testimony established, however, that the Philips machine did not disclose a mechanism for automatically sequencing all the machinery operations necessary for accurately loading magnetic use tape into a cassette with a minimum of operator intervention. Manual operation was required for, *inter alia*, inserting the tape into cassette shell-halves. Therefore, the relevance of Ooms and Philips can be limited to the use of suction to secure magnetic tape during splicing.

Otari also argues that it would have been obvious to one of ordinary skill in the art to combine the Ooms article and Philips machine with the Plastaras patent. Otari has pointed to no testimony in the record by, or related to, one of ordinary skill in the art, nor were we able to find any evidence which suggests the desirability of making such a combination. See *Fromson v. Advance Offset Plate, Inc.*, 755 F.2d 1549, 1556, 225 USPQ 26, 31 (Fed.Cir.1985) (nothing of record plainly indicated that it would have been obvious to combine the prior art). Thus, we do not believe that the district court failed to weight properly the scope and content of the prior art, and the differences between the prior art and the claimed invention as a whole.

After finding what constituted the most relevant prior art, the district court also correctly set forth the standard of one of ordinary skill in the art of tape winding:

> A person probably having at least a bachelor's degree in mechanical engineering with some knowledge of machine design and some experience with the handling of tape. It should or would be a graduate mechanical engineer, with at least two years' experience in machine design and tape handling design.

In addition, although the district court did not make an explicit finding relating to secondary considerations as objective indicia of non obviousness, there was significant relevant evidence before the district court. This included testimony showing that the King invention as defined by the claims of the '153 patent caused a profound change in the recording industry. The new King machines allowed cassette loading to advance from a state where production rates were approximately 450 cassettes per operator-day to 5,000 cassettes in a single eight-hour shift.[3]

In the face of conflicting evidence, opinions and argument, the district court concluded that Otari failed to overcome the presumption of validity by clear and convincing evidence. We have reviewed the record and Otari has not convinced us that the district court failed to make the required findings of fact, that those findings were clearly erroneous, or that the district court's ultimate legal conclusion of non-obviousness was erroneous.

---

[3]While there was no specific finding of nexus between the evidence of commercial success and the claimed invention, *see Simmons Fastener Corp. v. Illinois Tool Works, Inc.*, 739 F.2d 1573, 1575, 222 USPQ 744, 746 (Fed.Cir.1984), we may properly assume that this evidence entered into the district court's consideration under the correct standard.

B. The '358 patent.

The '358 patent application was filed on May 27, 1971. A tape loading device was offered for sale in a written price quotation on May 22, 1970 to Morningstar. The offer for two "King Turbo-matic 300-EC" cassette loaders contained a description of the specifications for the leader tape, the required power supply, a discount for two of Morningstar's old tape loaders, and a price quotation for a spare automatic splicer. This offer resulted in an acceptance confirmed by a purchase order dated June 8, 1970. The two loaders arrived at Morningstar on June 17, 1970. The district court found that, since the offer embodied the '358 claimed invention which had been reduced to practice by April 27, 1970, the '358 patent was invalid under 35 U.S.C. § 102(b).[4]

King argues that the district court failed to apply the three-part test enunciated in *Timely Products Corp. v. Arron*, 523 F.2d 288, 187 USPQ 257 (2d Cir.1975), which it says this court adopted as the standard for determining "on sale" under § 102(b) in *Barmag Barmer Maschinenfabrik v. Murata Machinery, Ltd.*, 731 F.2d 831, 221 USPQ 561 (Fed.Cir.1984). This three-part test requires that: (1) the complete invention claimed must have been embodied in or obvious in view of the thing offered for sale; (2) the invention must have been tested sufficiently to verify that it is operable and commercially marketable; and (3) the sale must be primarily for profit rather than for experimental purposes. 523 F.2d at 302, 187

---

[4]The portion of § 102 pertaining to the "on sale" bar reads:

A person shall be entitled to a patent unless—

* * *

(b) The invention was . . . on sale in this country, more than one year prior to the date of the application for patent in the United States . . . .

USPQ at 267-268. However, this court expressly held in *Barmag* that *Timely Products* is not adopted for all cases, and a less stringent standard might be appropriate in some circumstances where the underlying statutory policies might otherwise be frustrated. *Accord Western Marine Electronics v. Furano Electric Co.*, 764 F.2d—, 840 (Fed.Cir.1985).

These underlying policies include: (1) discouraging removal of inventions from the public domain which the public justifiably comes to believe are freely available; (2) favoring prompt and widespread disclosure of inventions; (3) giving the inventor a reasonable amount of time following the sales activity to determine the value of a patent, *see In re Caveney*, 761 F.2d 671, 676 (Fed.Cir.1985), and (4) prohibiting an extension of the period for exploiting the invention. Consistent with these policies, the district court properly relied on two factors as evidence of "on sale": (1) a sale or offer of sale of the invention, and (2) an existing reduction to practice of the invention by the time of the offer. *See generally Barmag, supra.* An offer to sell is sufficient under the policies animating the statute, which proscribes not a sale, but a placing "on sale." *D.L. Auld Co. v. Chroma Graphics Corp.*, 714 F.2d 1144, 1147, 219 USPQ 13, 18 (Fed.Cir.1984). Although it argues in the context of *Timely Products*, King's position is essentially that there was never an offer of sale before the critical date, nor was the '358 invention reduced to practice before that date.

To support its position that there was no such offer to sell the '358 invention, King asserts that the alleged offer for sale was phrased in language consistent with that used in concurrent quotations made to other companies for the '153 swing arm machines, not the '358 shift block machines. Moreover, there

was no reference in the offer as to how the machine worked. Other purchasers who received quotations containing the same general performance language could not say specifically which type of machine was being offered for sale. Robert Hunt of Morningstar, who allegedly received the '358 shift block machines in June, 1970, admitted he was "surprised" to receive the new device. The alleged offer becomes even more ambiguous, argues King, when one considers that the earlier swing arm and later shift block machines were both referred to as a "King Turbomatic Cassette Loader 300 EC". It is said, therefore, that no intent existed to make such an offer, nothing in the offer identified the subject matter of the invention, and no notice was given to the purchaser that a new or different machine existed.

While a bare, unexplained offer, not explicitly shown to be of the new invention, may be insufficient, the totality of the circumstances must always be considered in order to ascertain whether an offer of the new invention was in fact made. *Accord Barmag, supra.* When an executory sales contract is entered into (or offered) before the critical date, the purchaser must know how the invention embodied in the offer will perform. *See In re Dybel,* 524 F.2d 1393, 1400, 187 USPQ 593, 598 (CCPA 1975). The policies underlying the on sale bar, however, concentrate on the attempt by the inventor to exploit his invention, not whether the potential purchaser was cognizant of the invention. Accordingly, the purchaser need not have actual knowledge of the invention for it to be on sale. *In re Blaisdell,* 242 F.2d 779, 783, 44 CCPA 846, 850, 113 USPQ 289, 292 (1957). In this case, from the descriptions contained in the quotation (*e.g.*, "The loader measures tape in one foot increments from 2 feet to 999 feet"), the purchaser generally knew how

the machine would perform. King's argument that nothing in the quotation distinguishes the offer from any other offer for a swing arm machine is inaccurate. Comparison of the Morningstar quotation to those made to other companies reveals that only the offer to Morningstar included a 40% allowance for old machines. Although this distinction does not establish the existence of an offer to replace old swing arm machines with a "new" type of machine, such a possibility is another factor for the trier to consider.

As evidence that no offer was made before the critical date, King also argues that Morningstar did not receive two shift block machines in June 1970, but in fact received two swing arm machines embodying the invention claimed in the '153 patent. However, Hunt of Morningstar was convinced that the two machines received on June 17, 1970 were horizontal shift block machines. Review of Hunt's testimony shows that he was continuously connected with the cassette winding operation during this period of time. His unbiased live testimony is a sufficient basis for the district court to have concluded that the machines received embodied the '358 shift block invention.[5] The fact that Morningstar received two shift block machines is further support that the earlier ambiguous offer made on May 22, 1970 was in fact for shift block machines.

Even if there was an offer, King argues that the '358 invention was not reduced to practice before the critical date. The district court's conclusion that the invention was reduced to practice was based on the following findings of fact: (1) James King, Sr. testified that he had horizontal shift blocks on April 27, 1970;

---

[5]As King itself points out, why else would Hunt testify that he was "surprised" when he received machines with shift blocks.

(2) it was the custom at King to make sales of machines prior to the completion of drawings; (3) the assembly drawing of the '358 horizontal shift block device was prepared on May 16, 1970; and (4) it was the custom and practice of King to have assembly drawings prepared from an existing assembled machine. King responds by citing *McDonnell Douglas Corp. v. United States*, 670 F.2d 156, 214 USPQ 857 (Ct.Cl.1982), for the proposition that the mere existence of assembly drawings does not by itself establish a reduction to practice, and that reduction to practice usually requires at least a testing of the invention. We do not disagree. However, in *McDonnell*, all that the Court of Claims found was that the invention was not reduced to practice by computer simulation because physical tests revealed possible non-operability under certain conditions. That is not the situation in the instant case, and the district court found an actual reduction to practice.

Our predecessor court has recognized that the invention must have been "sufficiently tested to demonstrate that it will work for its intended purpose." *General Electric Co. v. United States*, 654 F.2d 55, 60, n. 8, 228 Ct.Cl. 192, 201, n. 8, 211 USPQ 867, 872, n. 8 (1981). But, in order for there to be a reduction to practice, there is no requirement that the invention when tested be in a commercially satisfactory stage of development. *Barmag, supra*, 731 F.2d at 838, 221 USPQ at 567. Moreover, the district court might have considered that "[s]ome devices are so simple and their purpose and efficacy so obvious that their complete construction is sufficient to demonstrate workability." *Eastern Rotorcraft Corp. v. United States*, 384 F.2d 429, 431, 181 Ct.Cl. 299, 305, 155 USPQ 729, 730 (1967). Here, testimony and other evidence supports the district court's finding that King

prepared assembly drawings from a completed and workable device. Accordingly, the district court did not err in inferring that the '358 invention embodied in an existing machine was sufficiently tested to constitute a reduction to practice. Rather, we are pursuaded that the district court's conclusion that the '358 patent in invalid as being "on sale" under § 102(b) is supported by clear and convincing evidence.[6]

III.

INFRINGEMENT OF THE '153 PATENT

The district court ruled that the Otari machines directly infringe the claims of the '153 patent. Otari asserts that this was erroneous because the '153 patent claims consist of "means plus function" language which require a finding (not specifically made here) of equivalency between the accused machines and what is described in the '153 patent specification. This court passes on judgments not opinions. Therefore, we review the record in order to determine whether there is, under the proper standard, a preponderance of evidence supporting the district court's finding of infringement.

As always in an infringement analysis, we start by looking to the language of the claims of the '153 patent. The most relevant portions of the claim language in issue are the "means plus function" clauses. Those means clauses appearing in claim 2 are illustrative:

> Apparatus for severing a leader tape that is attached at its opposite ends to two hubs into two lead-

---

[6]Because of this holding sustaining the on sale bar, we do not address Otari's appeal with respect to other channels of attack on the '358 patent, *e.g.*, anticipation, obviousness, other on sale defenses, noninfringement. Nor do we consider King's appeal relating to infringement of the '358 patent and increased damages for such infringement.

ers and for splicing said leaders to the opposite ends of a length of use tape obtained from a supply roll of said use tape, said apparatus comprising:

a splicing station comprising a first stationary tape support member and second and third moveable tape support members;

means for alternatively shifting said second and third support members . . .;

a knife operable to slit tape supported on said first and second splicing heads;

means for holding said supply roll of use tape . . .;

selectively operable third tape-holding *means . . .*;

selectively operable tape applicator *means . . .*;

selectively operable tape-winding *means . . .*;

control means for sequentially operating the foregoing means . . . . (Emphasis added.)

The corresponding structure disclosed in the specification of the '153 patent comprises the previously described swing arm device.

Construction of the scope of these claims must be made in the context of the last paragraph of 35 U.S.C. § 112, which states:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material or acts described in the specification and *equivalents thereof.* (Emphasis added.)

This court has recently reiterated that this section expressly calls for claim construction covering equivalents of the described embodiments. *Palumbo v. Don-Joy Co.*, 762 F.2d 969, 974 (Fed.Cir.1985); *see also D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 225 USPQ

236 (Fed.Cir.1985). The scope of such equivalents is a question of fact, and once the accused device is found to be an equivalent under § 112 then literal infringement has properly been established. *See Palumbo, supra.* As an aid for ascertaining the breadth of equivalents under § 112, a number of factors may be considered: the patent specification, the prosecution history of the patent, other claims in the patent, and expert testimony. *Palumbo, supra,* at 974. In looking to the first three factors, Otari has not cited any reason or basis in the record for limiting the '153 means claims to the swing arm embodiment.

The fourth important factor in the determination of these equivalents is the testimony of one skilled in the art. In the current case, there is significant evidence drawn from expert testimony which supports the conclusion that the Otari devices are § 112 equivalents of the described embodiment. This includes uncontested testimony based on observations made from video tapes of the Otari machines by Mr. Zimmerman who testified that claims 2, 4-6, 8-12, and 14-16 are directly infringed by the Otari machines. We believe that this testimony is sufficient for the district court to have concluded that Otari's machines are § 112 equivalents, and therefore literally infringe the '153 patent. Otari has failed to point out why Zimmerman's conclusions were wrong, has failed to describe its machines to this court[7], and has failed to meet its ultimate burden of convincing this court that the district court's finding of infringement was clearly erroneous.

IV.

---

[7]As we pointed out in note 1, *supra*, the pictorial essay was not before the district court, and therefore cannot be used as a basis for holding that the district court's finding was clearly erroneous.

DAMAGES

A. Compensatory damages for infringement of the '153 patent.

The district court has discretion in choosing the methodology for assessing and computing damages. The limitation on the court's discretion is that the award must be "adequate to compensate for the infringement," and cannot be "less than a reasonable royalty." 35 U.S.C. § 284; *Seattle Box Co. v. Industrial Crating and Packing, Inc.*, 756 F.2d 1574, 1581, 225 USPQ 357, 363 (Fed.Cir.1985). It is Otari's burden, as appellant, to show that the amount or method of assessing damages constituted an abuse of discretion by the district court.

In ascertaining the amount of damages, the court properly set forth and considered the following factors: the "amount or number of lost sales"; the "gross receipts plaintiff would have obtained from the lost sales had there been no infringement"; the "cost of sales to be deducted from gross receipts"; and King's "profit on the lost sales." On the basis of King's audited financial statements, the court found King's representative gross profit percentage to be 58.9% in 1977, 60.8% in 1978, and 59.0% in 1979. The number of sales of the infringing machines was determined to be 19 VL-100 machines, 85 VL-500 machines, 33 VL-600 machines, 91 DP-2700 machines and 3 DP-6755 machines. King's gross revenue which would have been received from sale of these machines was $3,831,685, and, by applying the gross profit percentages, lost profits were calculated to be $2,282,535. Otari asserts that this amount is erroneous because (1) there was no showing of causation, *i.e.*, King would not have made the sales, and (2) the calculation of damages was improper.

In general, the determination of a damage award is not an exact science. The trial court must best approximate the amount to which the patent owner is entitled. *Paper Converting Machine Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 22, 223 USPQ 591, 599 (Fed.Cir.1984).[8] When a patent owner would have made the sale of a product "but for" the infringement, the award based on his lost profits is appropriate. *Paper Converting Machine Co.*, 745 F.2d at 21, 223 USPQ at 598; *Bio-Rad Laboratories, Inc. v. Nicolet Instrument Corp.*, 739 F.2d 604, 616, 222 USPQ 654, 663 (Fed.Cir.), *cert. denied*, —U.S.—, 105 S.Ct. 516, 83 L.Ed.2d 405 (1984). Generally, as the parties agree, a lost profits award requires (1) a showing that the patent owner would have made the sale but for the infringement, *i.e.*, causation existed, and (2) proper evidence of the computation on the loss of profits. *Id.*

The patent owner's burden of proof is not absolute, but one of reasonable probability. This proposition is exemplified in the recent opinion of this court in *Kori Corp. v. Wilco Marsh Buggies and Draglines, Inc.*, 761 F.2d 649 (Fed.Cir.1985). In *Kori*,, we held that the district court's use of an infringer's profit margin for comparison purposes in determining the reasonableness of a patent owner's estimate of lost profits did not constitute an abuse of discretion. The bottom line is that the trial court must be afforded reasonable flexibility in awarding lost profit damages.[9]

---

[8]At oral argument before this court, when counsel for Otari was asked if the damage award approximated what King would have received from Otari in the first place, he responded in the affirmative.

[9]Otari cites *Central Soya v. George Hormel & Co.*, 723 F.2d 1573, 220 USPQ 490 (Fed.Cir.1983) for the proposition that this court has adopted the particular standard for lost profits set forth in *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 197 USPQ

Otari alleges here that King failed to carry the burden of proving causation. More specifically, Otari says that any King machines that may have been "equivalent" to Otari's infringing machines were not in production until 1982, long after the period of accounting used by the district court to calculate damages. Thus, King could not have made the sales made by Otari. Otari states, also, that King would not have sold any of its machines to Minnesota Mining & Manufacturing Company which purchased the vast bulk of the accused Otari machines.

As we have said, King need not prove causation as a certainty. Evidence which shows a reasonable probability that King would have made the infringing sales made by Otari will suffice. *See Bio-Rad, supra,* 739 F.2d at 616, 222 USPQ at 663. There was evidence that at the time of Otari's infringing activities, King was Otari's main competitor and the only other company capable of manufacturing under the claims of the '153 patent. This capability was demonstrated by the later development and sale of the King Model No. 590 in-cassette video winder and loader. King need not meet the impossible burden of negating every possibility that a purchaser might not have bought another product or might not have bought any comparable product at all. *See Gyromat, supra* 735 F.2d, 554, 222 UPSQ at 7. The district court heard extensive and relevant testimony from both sides, naturally weighing and assessing the credibility of such testimony. On this record, we cannot say that the district

---

726 (6th Cir.1978). The four part test in *Panduit* has been approved by this court as one method of calculating lost profits. *See Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 552, 222 USPQ 4, 6 (Fed.Cir.1984); *see also Bio-Rad, supra*, 739 F.2d at 616 n., 222 USPQ at 663 n. These cases recognize that *Panduit* is, however, not the exclusive test.

court was clearly erroneous in its implicit[10] determination of causation.

Apart from the issue of causation, Otari urges that the district court's damage calculation was clearly erroneous. Since the bulk of lost sales occurred in the 1980's when King was manufacturing an equivalent machine to the Otari machines, Otari states that the earlier 1970's gross profit percentages should not have been used as the base to compute damages. King retorts that Otari is essentially requesting mitigation of damages caused by its own infringement. There is evidence that during Otari's infringement in the 1980's, sales by King were artificially depressed, thereby depressing King's profit margin. Otari should not benefit for being a better infringer in the 1980's than in the 1970's. Under controlling principles of equity, any risk of uncertainty must be cast upon the wrongdoer rather than upon the injured party. *See Kori, supra,* at 655. Moreover, the use of the patent owner's profit margin, unaffected by the infringing sales, is necessary to estimate what the patent owner's lost profits would have been had there never been an infringement. Thus, the use of the profit margin obtained from the 1970's is a relevant basis for approximating King's lost profits.

Otari also assails the profit margin level applied by the district court as exceptionally high and unreasonable on its face. But Otari failed below to controvert evidence of King's gross profit percentages which were set forth in financial statements. Therefore, we

---

[10]Otari contends that the district court improperly failed to make an explicit finding of causation. In light of the factors the district court set forth at the outset, *see supra*, and the significant evidence of causation, we judge that the district court understood the requirement of causation and that such a finding naturally flows from the district court's ultimate findings.

cannot conclude that the profit margin used by the district court is clearly erroneous or that the size of the overall award for lost profits is too speculative or constitutes an abuse of discretion

B. Damages for spare parts.

Otari also assigns error in the district court's award of damages based on spare parts. We hold that the evidence found in the present record is insufficient to support the district court's conclusory finding that "[t]he lost profits from the sale of parts incurred by plaintiff is $438,810."

King asserts that it presented evidence at the trial that the proportion of spare parts sold with respect to tape loading machines was generally 20% of the machine's cost. This evidence, based on the direct testimony by King's Vice President and Sales Manager, Cline, is revealing for what it fails to state:

> Q: (By Mr. Albritton) I think you also testified that spare parts sales by your company normally ran at about twenty percent of gross.
>
> A: That's the average, yes, sir.
>
> Q: So if you were to take twenty percent of $2,358,275 [sic], what would you get for spare parts?
>
> A: $471,655 [sic]

This is the only testimony pertaining to spare parts that we were able to find—King did not cite nor were we able to find the antecedent testimony referred to by Mr. Albritton. The sole documentary evidence which we found (without the aid of the parties) appeared in the May 22, 1970 offer from King to Morningstar. Item 2 in the description in that offer consisted of a

> Spare automatic splicer for quick replacement when splicer on machine needs sharpening or over haul. Recommend 1 spare automatic splicer each three loaders.

The price quoted for the spare splicer was $490, while the price for the overall King Turbo-matic loader was $6,995. In light of the recommendation of one spare splicer per three machines, the spare part sale embodied in the Morningstar offer constitutes less than 2½ of the gross (for the three machines).

The "entire market value" rule allows for the recovery of damages based on the value of an entire apparatus including non-patented parts, even though only one of the features in the apparatus is patented. *Paper Converting Machine Co. v. Magna Graphics Corp.*, 745 F.2d 11, 22, 223 USPQ 591, 599 (Fed.Cir.1984). This court has recognized that under this rule, "it is 'the financial and marketing dependence on the patented item under standard marketing procedures' which determines whether the non-patented features of a machine should be included in calculating compensation for infringement." *Kori, supra,* at 656 (citing *Leesona Corp. v. United States,* 599 F.2d 958, 974, 202 USPQ 424, 439 (Ct.Cl.), *cert. denied,* 444 U.S. 991, 100 S.Ct. 522, 62 L.Ed.2d 420 (1979). The controlling touchstone in determining whether to include the non-patented spare part in a damage award is whether the patentee can normally anticipate the sale of the non-patented component together with the sale of the patented components. *Kori, supra,* at 656; *Paper Converting,* 745 F.2d at 223 USPQ at 599; and *Tektronix, Inc. v. United States,* 552 F.2d 343, 351, 193 USPQ 385, 393 (Ct.Cl.1977).

As support for the district court's finding, King asserts that its spare parts are not consumable supplies for which no recovery is possible, but are parts which it normally sells with the patented swing arm machine. Such a simplistic outlook fails to perceive the underlying significance of the entire market value

rule, which was accurately applied by one of our predecessor courts in *Leesona Corp. v. United States, supra.* In defining those spare parts for which a patent owner may recover, the Court of Claims recognized that parts for such items that experience had shown might be destroyed during the normal use of a device should be distinguished from parts which derive their existence and value from the patent. 559 F.2d at 974, 202 USPQ at 439. "(A)fter a patentee has collected from . . . a direct infringer damages sufficient to put him in the position he would have occupied had there been no infringement, he cannot thereafter collect actual damages from a person liable only for contributing [*i.e.*, by the sale of spare parts] to the same infringement" *Aro Mfg. Co. v. Convertible Top Co.*, 377 U.S. 476, 512, 84 S.Ct. 1526, 1545, 12 L.Ed.2d 457, 141 USPQ 681, 696 (1964) (*Aro II*). The only recoverable position the patent owner would have occupied had there been no infringement is one where he normally would have anticipated the sale of the spare parts. In other words, the question is whether King would have made the sale of spare parts but for Otari's infringement. An affirmative answer to this question is illustrated in *Leesona* where a patented battery system envisioned that many parts (*i.e.*, anodes) would be necessary to keep the battery in operation. During the normal "life cycle" of a battery, the 22 anodes for each battery would be replaced approximately 50 times. The battery's very uniqueness was found in the replacement of the anodes rather than in the reliance on "a cumbersome recharging device." 599 F.2d at 975, 202 USPQ at 440.

Whether King would anticipate additional income from the sale of spare parts is a finding which we cannot disturb unless it is clearly erroneous. *Paper Converting, supra,* 745 F.2d at 23, 223 USPQ at 600.

We agree with Otari, however, that on the record before this court, there is no evidence, other than unsupported arguments made by counsel, that King normally anticipated selling spare parts as part of the overall swing arm package.[11] In addition, we are unable to find any evidence that the availability of spare parts is critical to the uniqueness of the '153 swing arm device. As we have seen, "spare parts" in and of itself is an unclear term capable of more than one definition. Only when a spare part falls under the "entire market value" rule may the patentee recover. On the basis of the evidence before us, we cannot find a sufficient basis for the bare conclusion that King would have made the sales of "spare parts" but for Otari's infringing sales. Accordingly, we vacate the district court's award of lost profits based on spare parts and remand for a determination of whether King's spare parts are of the type for which it may properly recover.

C. Increased damages.

King appeals from the district court's determination that it is not entitled to either increased damages under 35 U.S.C. § 284 or an award of attorney fees as permitted by 35 U.S.C. § 285. In support of its argument that the district court erred, King asserts that Otari set out on a willful and deliberate path of infringing the '153 patent. An award of increased damages, however, is within the discretion of the trial

---

[11]As we pointed out, *supra*, one spare splicer per three machines was recommended in the Morningstar offer. However, we are unable to find that such evidence might have been considered as relevant by the district court in light of the disparity between the approximately 2-1/2% of gross sales for spare parts found in the Morningstar offer and the 20% of gross ultimately found by the district court.

court, *see* 35 U.S.C. § 284,[12] and will not be overturned absent a clear showing of an abuse of discretion.

King tells us that a review of the chronology of events over the past 15 years shows that the district court abused its discretion in failing to award increased damages. Before the '153 patent issued, Otari acquired an early King machine and then later filed its own patent application in Japan in 1971. Then, on March 30, 1972, Otari filed an application corresponding to its Japanese application in the United States. On March 19, 1974, U.S. Patent No. 3,797,770('770) entitled "Automatic Cassette Tape Winding Apparatus" was granted on the Otari application.

King has failed to convince us how this type of activity constitutes a basis for a finding of willful infringement. Although this set of facts does not indisputably negate a possible finding of willfulness, one reasonable interpretation is that Otari was attempting to design its tape winding apparatus so as to avoid the claims of the '153 patent. Even though its activities later constituted infringement, by relying on the issuance of its patent, which even cited the '153 patent as prior art, Otari's management might reasonably have believed that its actions were protected as within its own patentably distinct claims, while falling outside the '153 patent claims. For the district court to make such an inference does not constitute clear error.

King also cites *Underwater Devices, Inc. v. Morrison-Knudsen Co.*, 717 F.2d 1380, 219 USPQ 569 (Fed.Cir.1983), for the proposition that Otari had an

---

[12]In relevant part, § 284 states that "[t]he court *may* increase the damages up to three times the amount found or assessed." (Emphasis added.)

affirmative duty to seek and obtain legal advice from counsel before the initiation of possible infringing activities. However, as we stated in that case, the district court should always look at the totality of the circumstances. This includes whether Otari secured legal advice and whether it reasonably felt that its activities fell within its own claims which may be patentably distinct. While irrelevant in an infringement analysis, these factors can be considered by the trier in determining Otari's intent in connection with a decision on willfulness *vel non*.

As further evidence of willfulness, King points to a written request in 1973 by Otari for a license on the King tape loading and winding machine. King turned down the offer because it "didn't think there would be any advantage to our corporation to issue a license." Since Otari did in fact infringe the '153 patent claims, argues King, then the offer and subsequent refusal of a license shows that Otari set out on a conscious path of infringing activity.

Events and circumstances surrounding a license negotiation are merely an element of willfulness for the district court to consider. Negotiations might even support an infringer's good faith if the infringer could show that it desired a license agreement as an alternative to unaffordable or expensive litigation costs. *See Gould v. General Photonics Corp.*, 534 F.Supp. 399, 403, 215 USPQ 116, 119 (N.D.Cal.1982). King attempts to distinguish *Gould* by pointing out that the parties in that case negotiated for a license just prior to suit, while in the current case negotiations were some five years before Otari's active sales of infringing devices. We find, however, that the hiatus which King claims as further evidence of willfulness simply represents one factor which the district court

could and most probably did weigh in its determination.

In reaching its ultimate determination, the district court properly weighed the evidence of the totality of the surrounding circumstances in ascertaining the infringer's good faith or its willfulness. *See Underwater Devices, supra*, 717 F.2d at 1390, 219 USPQ at 577. Giving due deference to the trier's right to determine credibility and the weight of the evidence before him, as we must, we cannot agree that the implicit finding of lack of willful infringement was clearly erroneous. Accordingly, we hold that on the record before us it was not an abuse of the district court's discretion to deny King's request for increased damages.

Based on the above evidence of "flagrant disregard of the ['153] patent" and Otari's dilatory and misleading discovery practices, King also asks us to reverse the district court's denial of attorney fees. Like an award of increased damages, an award of attorney fees under 35 U.S.C. § 285 is discretionary, and such discretion should only be exercised upon a finding of exceptional circumstances. *See Stevenson v. Sears, Roebuck & Co.*, 713 F.2d 705, 712-13, 218 USPQ 969, 975 (Fed.Cir.1983). For the same reasons set forth above and because a motion for sanctions relating to discovery practices is still awaiting resolution in the district court, we find that the district court did not abuse its discretion, and therefore affirm the denial of King's attorney fees.

V.

SUMMARY

We have fully considered all the issues raised by King and Otari on appeal and cross-appeal. The de-

cisions of the district court on validity and infringement are affirmed. The decisions on damages and fees are also affirmed, except the award based on spare parts, which is vacated and remanded for further proceedings in accordance with this opinion.

AFFIRMED IN PART, VACATED AND REMANDED IN PART.